TCEQ/EPA Regional Haze Meeting
May 9, 2019 10:30am-3pm

AGENDA

I. Introductions
II. Comments Received on BART "Proposal to Affirm"
III. Potential Changes to the Trading Program
IV. Second Planning Period
V. Wrap Up and Review of Action Items

I. Comments Received on BART "Proposal to Affirm"

Background:

- Texas BART proposal (83 FR 43586; August 27, 2018): proposed to affirm the intrastate SO_2 Trading Rule previously finalized in October 2017. The rationale supporting a Texas-only SO_2 trading program for BART was that the trading program would result in SO_2 emissions from Texas EGUs similar to emissions anticipated under CSAPR: if CSAPR>BART nationwide, then "Texas-only program + CSAPR">BART nationwide.
- When looking at the details of the proposed Texas SO_2 trading program, it is possible (though unlikely) that the annual emissions from EGUs in Texas can exceed the projected Texas EGU emissions under CSAPR.
- The Texas trading program implementation began on January 1, 2019.

Key Issues Raised in Comments:

- The Trading Rule does not meet the analytical demonstration required for a BART Alternative under 51.308(e)(2).
  - Under 51.308(e)(4), states participating in CSAPR can rely on that program to satisfy the BART requirements for their EGUs for the pollutant covered by the trading program in the State.
  - 51.308(e)(2) provides for alternative measures or emission trading programs that provide for greater reasonable progress than BART. The 2-prong test requires that: 1) visibility does not decline in any areas when compared to the baseline; and 2) that the alternative provide for an overall improvement in visibility (on average across all impacted Class I areas) when compared to BART.
  - In our proposed rule, we reiterated that our trading program, in the context of CSAPR in other states, was better than BART. Since the program was designed to achieve SO_2 emission levels that are functionally equivalent to those projected for Texas' participation in the original CSAPR program, the trading program is therefore better than BART.
  - Commenters assert:
    - EPA should have compared the Texas trading program (in isolation) to source-specific BART in Texas, which can be done by looking at the Jan 2017 proposal
    - EPA's comparison to CSAPR is improper, since CSAPR is not the BART benchmark.
    - EPA cannot rely on the "category-wide" analytical approach to determine the BART benchmark (as was done in the CSAPR better than BART demonstration) since the Texas

program was not developed for reasonable progress, interstate visibility transport, or other CAA requirements other than BART.

- EPA cannot establish that the alternative is better than BART on a weight-of-evidence analysis
- The "Trading Rule in the context of CSAPR everywhere is better than BART" approach poses legal risk to the nationwide CSAPR better than BART rulemaking (additional information included as attachment).
- Because the program did not impose enforceable limits until 2019, after the first long-term strategy period, a BART-alternative approach is not available (40 CFR 51.308(e)(2)(iii)). The TX trading program began implementation on 1/1/2019.
- Proposing to affirm does not cure the notice and comment defect of our October 2017 final rule. Commenters cited Fifth Circuit CAA case law that merely taking comment on an already-final rule is insufficient for APA purposes.
- Program cannot be suspended merely on the basis of a SIP submission.
- Interstate visibility transport requirements are not met.
- PM screening approach is improper. We have responses to the comments regarding our decision to approve TX's finding that no sources are subject to BART for PM.
- The rulemaking is of nationwide scope and effect. Commenters apparently would like to obtain review in the DC Circuit. However, they filed suit on the underlying FIP only in the 5th Circuit.

Interaction with "CSAPR Still Better than BART"

- In September 2017 rulemaking EPA removed Texas from the annual NOx and SO_2 trading programs in response to the DC Circuit Court's remand of several CSAPR SO_2 budgets.
- We concluded that CSAPR remained better-than-BART despite the removal of Texas. This conclusion was based on the fact that if we were re-doing the 2012 CSAPR better than BART analysis, Texas would not have been a CSAPR state and should be considered to be implementing presumptive BART like other non-CSAPR states in the analysis.
- We received comments and later a petition concerning emission shifting and the assumption of presumptive BART for Texas for the purposes of the analysis.

III. Potential Changes to the Trading Program

Options to Minimize Risk to Texas Action and CSAPR>BART Petition

Table 1. Recent Emissions Trends

	2016	2017	2018
Texas total EGU emissions	245737	275965	211025
Participating sources emissions	218291	245870	179628
Non-participating sources emissions	27446	30096	31397

Table 2. Some key figures related to CSAPR>BART and the proposed Texas BART FIP

	Tons SO_2
Assumed CSAPR emissions for all Texas EGUs that CSAPR>BART analysis is based on (from Timin memo)	316,784
Texas' assurance level in CSAPR	347,476
Annual allocations to EGUs participating in Texas-only trading program	238,393
Additional allowances that can be allocated each year from supplemental allowance pool[1]	54,711
Proposed alternative limit on allowances that can be allocated each year from supplemental allowance pool	41,335
Recent (2016/2017) emissions of EGUs not in Texas-only program (651 tons from gas units + 26,795 tons from coal units)	27,446/30,096
Total emissions for Texas program (sum of annual allocations, supplemental pool, and emissions from non-participating units of approx. 30,000), not accounting for banking	~323,000 (~310,000 with lower allowance pool limit)

[1] The sum of 54,711 and 238,393 is 293,104, which represents the maximum number of allowances that could be allocated in a given year. But, the maximum number of tons that could be emitted is actually more than that due to banking. E.g., the retired units receive their allocations for 5 years and if banked, those allowances are available for use on top of the allowances allocated to operating units, as well as the up-to-54,711 allowances that will eventually build up and then may be allocated from the Supplemental Allowance Pool. The current estimate of allowances going to retired units is 74,313 tons annually. Thus, by the second or third year of the program, the number of allowances available to be emitted without any limit (because there is no assurance level) is in fact well in excess of the CSAPR budget or assurance level.

Table 3. 2018 Annual Emissions compared to Allowance Allocations

Owner/ Operator	Units	Allocations (tpy)	shutdown	2018 emissions (tpy)	excess allowances	owner excess allowances
AEP	Welsh Power Plant Unit 1	6,496	n	7528	-1,032	
	Welsh Power Plant Unit 2	7,050	y		7,050	
	Welsh Power Plant Unit 3	7,208	n	6694	514	
	H W Pirkey Power Plant Unit 1	8,882	n	5085	3,797	
	Wilkes Unit 1	14	n	1	13	
	Wilkes Unit 2	2	n	1	1	
	Wilkes Unit 3	3	n	1	2	**10,346**
CPS Energy	JT Deely Unit 1	6,170	y*	8151	-1,981	
	JT Deely Unit 2	6,082	y*	7212	-1,130	
	Sommers Unit 1	55	n	1	54	
	Sommers Unit 2	7	n	2	5	**-3,053**
El Paso Electric	Newman Unit 2	1	n	1	0	
	Newman Unit 3	1	n	1	0	
	Newman Unit 4	2	n	1	1	**1**
LCRA	Fayette / Sam Seymour Unit 1	7,979	n	532	7,447	
	Fayette / Sam Seymour Unit 2	8,019	n	538	7,481	**14,927**
NRG	Limestone Unit 1	12,081	n	4156	7,925	
	Limestone Unit 2	12,293	n	4164	8,129	
	WA Parish Unit WAP4	3	n	1	2	
	WA Parish Unit WAP5	9,580	n	12986	-3,406	
	WA Parish Unit WAP6	8,900	n	12684	-3,784	
	WA Parish Unit WAP7	7,653	n	10959	-3,306	**5,561**
Vistra	Coleto Creek Unit 1	9,057	n	13213	-4,156	
	Big Brown Unit 1	8,473	y	3401	5,072	
	Big Brown Unit 2	8,559	y	3258	5,301	
	Martin Lake Unit 1	12,024	n	19282	-7,258	
	Martin Lake Unit 2	11,580	n	17167	-5,587	
	Martin Lake Unit 3	12,236	n	19749	-7,513	
	Monticello Unit 1	8,598	y		8,598	
	Monticello Unit 2	8,795	y		8,795	**23,721**

Owner/ Operator	Units	Allocations (tpy)	shutdown	2018 emissions (tpy)	excess allowances	owner excess allowances
	Monticello Unit 3	12,216	y		12,216	
	Sandow Unit 4	8,370	y	487	7,883	
	Stryker ST2	145	n	0	145	
	Graham Unit 2	226	n	0	226	
Xcel	Tolk Station Unit 171B	6,900	n	5513	1,387	
	Tolk Station Unit 172B	7,062	n	4446	2,616	
	Harrington Unit 061B	5,361	n	3617	1,744	
	Harrington Unit 062B	5,255	n	5226	29	
	Harrington Unit 063B	5,055	n	3569	1,486	**7,261**
Supplemental Allowance pool		10,000				
Total		248,393		179628	58765	**58,765**
Total for shutdown units		*74,313*		*22,510*		

Owner/ Operator	Units	Annual Emission rate (lb/MMBtu			Annual emissions (tons/yr)			Annual Heat input (MMBtu/yr)		
		2016	2017	2018	2016	2017	2018	2016	2017	2018
AEP	Welsh Power Plant Unit 1	0.433	0.458	0.463	4861	8147	7528	2.25E+07	3.55E+07	3.25E+07
	Welsh Power Plant Unit 2	0.409			1144			5.59E+06		
	Welsh Power Plant Unit 3	0.433	0.457	0.459	5042	5927	6694	2.33E+07	2.59E+07	2.92E+07
	H W Pirkey Power Plant Unit 1	0.170	0.173	0.191	4441	3960	5085	5.21E+07	4.58E+07	5.33E+07
	Wilkes Unit 1	0.000	0.001	0.001	1	1	1	3.76E+06	3.02E+06	2.97E+06
	Wilkes Unit 2	0.000	0.001	0.001	1	0	1	2.69E+06	1.04E+06	1.83E+06
	Wilkes Unit 3	0.000	0.001	0.001	0	0	1	1.56E+05	9.34E+05	2.02E+06
CPS Energy	JT Deely Unit 1	0.515	0.503	0.530	3569	6103	8151	1.38E+07	2.43E+07	3.08E+07
	JT Deely Unit 2	0.515	0.499	0.528	4056	5253	7212	1.58E+07	2.11E+07	2.73E+07
	Sommers Unit 1	0.001	0.001	0.001	1	1	1	3.15E+06	2.51E+06	4.59E+06
	Sommers Unit 2	0.001	0.001	0.001	1	1	2	2.60E+06	2.96E+06	6.17E+06
El Paso Electric	Newman Unit 2	0.001	0.001	0.001	1	1	1	3.84E+06	3.68E+06	1.76E+06
	Newman Unit 3	0.001	0.001	0.001	1	1	1	3.72E+06	3.17E+06	3.70E+06
	Newman Unit 4	0.001	0.001	0.001	1	2	1	2.95E+06	5.33E+06	4.53E+06
LCRA	Fayette / Sam Seymour Unit 1	0.029	0.017	0.024	498	387	532	3.44E+07	4.65E+07	4.36E+07
	Fayette / Sam Seymour Unit 2	0.017	0.022	0.026	379	487	538	4.51E+07	4.41E+07	4.09E+07
NRG	Limestone Unit 1	0.435	0.200	0.160	9773	4337	4156	4.49E+07	4.33E+07	5.19E+07
	Limestone Unit 2	0.494	0.218	0.169	11028	5903	4164	4.47E+07	5.40E+07	4.92E+07
	WA Parish Unit WAP4	0.000	0.001	0.001	2	1	1	5.27E+06	4.96E+06	3.67E+06
	WA Parish Unit WAP5	0.637	0.602	0.608	11044	1245 7	1298 6	3.47E+07	4.14E+07	4.27E+07
	WA Parish Unit WAP6	0.637	0.585	0.635	10795	1290 2	1268 4	3.39E+07	4.41E+07	3.99E+07
	WA Parish Unit WAP7	0.651	0.612	0.642	9184	1035 8	1095 9	2.82E+07	3.39E+07	3.41E+07
Vistra	Coleto Creek Unit 1	0.505	0.592	0.642	8231	1220 1	1321 3	3.26E+07	4.12E+07	4.11E+07
	Big Brown Unit 1	1.241	1.141	1.514	21532	2413 8	3401	3.47E+07	4.23E+07	4.49E+06

	Big Brown Unit 2	1.225	1.138	1.507	20938	23494	3258	3.42E+07	4.13E+07	4.32E+06
	Martin Lake Unit 1	0.447	0.521	0.733	11515	12560	19282	5.15E+07	4.82E+07	5.26E+07
	Martin Lake Unit 2	0.318	0.426	0.779	5266	9571	1716 7	3.31E+07	4.50E+07	4.41E+07
	Martin Lake Unit 3	0.457	0.611	0.750	8690	14311	1974 9	3.80E+07	4.69E+07	5.27E+07
	Monticello Unit 1	0.764	0.771		8835	11433		2.31E+07	2.97E+07	
	Monticello Unit 2	0.780	0.771		8716	12808		2.24E+07	3.32E+07	
	Monticello Unit 3	0.358	0.247		7407	5169		4.13E+07	4.19E+07	
	Sandow Unit 4	0.562	0.786	0.750	12105	17446	487	4.30E+07	4.44E+07	1.30E+06
	Stryker ST2	0.000	0.001	0.001	0	0	0	1.61E+06	9.07E+05	1.19E+06
	Graham Unit 2	0.001	0.001	0.001	0	0	0	9.21E+05	6.49E+05	9.40E+05
Xcel	Tolk Station Unit 171B	0.527	0.531	0.552	7081	6719	5513	2.69E+07	2.53E+07	2.00E+07
	Tolk Station Unit 172B	0.523	0.528	0.491	7896	6907	4446	3.02E+07	2.62E+07	1.81E+07
	Harrington Unit 061B	0.490	0.511	0.504	3796	3514	3617	1.55E+07	1.37E+07	1.43E+07
	Harrington Unit 062B	0.519	0.528	0.491	5073	4764	5226	1.96E+07	1.80E+07	2.13E+07
	Harrington Unit 063B	0.518	0.527	0.457	5386	4604	3569	2.08E+07	1.75E+07	1.56E+07
Total					218291	245870	179628	8.97E+08	1.00E+09	7.99E+08

Table 4. Emissions and Heat Input for 2016, 2017 and 2018

Remaining Obligations from the First Planning Period

a. Reasonable Progress

- In our Reasonable Progress FIP, we proposed to approve certain elements and disapprove other elements of Texas' RH SIP.
- Due to the voluntary remand, certain RH obligations remain unaddressed.

Table 5. Elements of the Reasonable Progress FIP (Remanded)

BART	
√	Determination of which sources in the state are BART-eligible
√	Determination that none of the state's BART eligible non-EGUs are subject to the BART requirements
√	Provisions in Texas' BART rules at 30 TAC 116.1500-116.1540, with exception of 30 TAC 116.1510(d) [reliance on CAIR]
Reasonable Progress Goals for Texas	
x	RPGs for 2018 on the 20% least impaired and 20% most impaired days for Big Bend and Guadalupe Mountains Class I areas
x	Not demonstrated that the state's RPGs provide for reasonable progress towards meeting the national visibility goal
x	Texas did not satisfy several of the requirements at 51.308(d)(1) with regard to setting RPGs, especially the requirement to reasonably consider the four statutory reasonable progress factors and the requirement to adequately justify RPGs that are less stringent than the URP
Calculations of Baseline and Natural Visibility Conditions	
√	Calculation of baseline visibility conditions at Big Bend and Guadalupe Mountains Class I areas
x	Calculation of natural visibility conditions at these Class I areas
x	Calculation of the URP
Long-Term Strategy	
x	Long-term strategy does not sufficiently address regional haze visibility impairment for all Class I areas impacted by Texas
x	Did not satisfy several of the requirements of 51.308(d)(3) with regard to developing long-term strategies
x	Does not include all measures necessary to obtain the state's share of emission reductions needed to make reasonable progress in the Wichita Mountains Class I area in Oklahoma
x	Technical basis on which Texas relied to determine its apportionment of emission reduction obligations necessary for achieving reasonable progress in the Wichita Mountains was inadequate
x	Texas did not adequately consider the emissions limitations and schedules for compliance needed to achieve reasonable progress in Big Bend, Guadalupe Mountains, or Wichita Mountains
√	Identification of anthropogenic sources of visibility impairment and the consideration of emission reductions due to ongoing air pollution control programs
√	measures to mitigate the impacts of construction activities
√	source retirement and replacement schedules

√	smoke management techniques
√	enforceability
√	projected changes in emissions
Monitoring Strategy	
√	approved monitoring strategy

b. Five Year Progress Report

IV. Second Planning Period SIP

- Outside of the CenSARA collaborative work, has TCEQ done any additional work to gear up for the second planning period?
- Does TCEQ plan to submit a SIP that would incorporate the trading program for second planning period?
- EPA is investigating whether/how TCEQ can address remaining obligations from first planning period in the second planning period SIP.

V. Wrap up and Action Items

ADDENDUM A: CSAPR>BART BACKGROUND:

- EPA promulgated CSAPR>BART in 2012, based on a technical analysis that compared the visibility levels resulting from 3 modeled scenarios: 1) a base case without CSAPR or BART, 2) nationwide presumptive BART, or 3) CSAPR and BART elsewhere.
- Based on this modeling analysis, CSAPR met the 2-prong test (visibility did not decline in any areas when comparing scenario 3 with scenario 1 and scenario 3 was better than scenario 2 when averaged over all affected Class I areas) and was found to be better than BART.
- In a September 2017 rulemaking ("CSAPR Still Better than BART") (82 FR 45481):
  - EPA removed Texas from the annual NOx and SO_2 trading programs in response to the DC Circuit Court's remand of several CSAPR SO_2 budgets.
  - We concluded that CSAPR remained better-than-BART despite the removal of Texas. This conclusion was based on the fact that if we were re-doing the 2012 analysis, Texas would not have been a CSAPR state and should be considered a BART state in both scenario 2 and 3. Therefore scenario 3 would produce even more visibility improvements, making it even better than BART.
  - The CSAPR>BART reaffirmation had to be finalized before the final action addressing Texas BART because EPA needed to rely on CSAPR>BART to meet Texas's NOX BART obligations.
  - It wasn't practical to base the CSAPR>BART reaffirmation on an assumption that Texas would be doing something other than source-specific presumptive BART because the idea of a Texas-only BART alternative program had not yet been publicly raised.
  - We responded to a public comment related to the potential for emissions shifting by comparing the magnitude of the potential emissions shifting (most likely to GA and AL due to Texas no longer purchasing those allowances) by pointing to the emissions reductions expected under source-specific presumptive BART in Texas.
  - EPA received a petition to reconsider the CSAPR>BART aspects of the 2017 rulemaking from NPCA and Sierra Club. We have not yet responded to this reconsideration petition. The petition claims:
    - EPA can no longer rely on an outdated 2012 analysis.
    - After EPA used the potential emissions reductions in Texas as support for why emissions shifting is not likely to adversely impact CSAPR>BART, EPA finalized a BART FIP in Texas with no real emissions reductions. (this is the most challenging aspect of this petition).
    - EPA's assumption of presumptive BART in Texas is invalid, given the Texas-only trading program.
  - Also presented their own analysis that in a subset of Class I areas, BART would be better than CSAPR.